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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,189

06/30/2003

Michael D. Bowman

03-0431

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02/14/2008

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EXAMINER

PARRIES, DRU M

ART UNIT

PAPER NUMBER

2836

NOTIFICATION DATE

DELIVERY MODE

02/14/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/604,189	<b>Applicant(s)</b> BOWMAN ET AL.	
	<b>Examiner</b> DRU M. PARRIES	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,6,9-14,16-19 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,6,9-14,16-19 and 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed December 7, 2007 have been fully considered but they are not persuasive. Regarding the Applicant's arguments, and quotes from the specification, regarding the "secondary loads", since none of the in-depth description found in the specification is explicitly written in the claims, those arguments are moot. Any load in any prior art reference could broadly be interpreted as a "secondary load". For example, if a reference taught two loads, one could say that that reference teaches a primary and a secondary load. However, regarding the Lacy reference, it is even more explicitly distinguished that one could say that there are primary (18, loads that are always receiving power; most necessary) and secondary loads (16, that can optionally receive power). The Examiner suggests that the Applicant, when concocting arguments, refer to specific claim language and argue that a prior art reference of record doesn't teach a particular claim limitation. In this instance, Lacy DOES teach primary and secondary loads.
2. Regarding the argument that Lacy does not make a distinction between which loads are of primary importance, the Applicant admits that Lacy determines priority of the controlled (secondary) loads, and that alone shows Lacy making that distinction, regardless of how that distinction is determined (power demand).
3. Regarding the newly added limitation to claim 1, the Applicant admits that Lacy's control circuit monitors the output power of the power source (fuel cell) to all loads (controlled and uncontrolled), which means, when modified into Soucy's invention, that the references determine engine primary power extraction. Also, this shows that Lacy does determine the combined

power demand of the controlled loads (contrary to what Applicant argues at the top of page 13). Also, Lacy does teach a power limit set on the controlled load group. That is the point of using priority load shedding. When the power limit is exceeded, priority load shedding kicks in and begins to shed loads until the combined power demand of the controlled loads is below the power limit set on the controlled load group.

4. Regarding the last few paragraphs from the Applicant's arguments, the Examiner would like to refer the Applicant to the previous Office Action for his response to those arguments, because the Examiner's views on these issues have not changed. Also, the Examiner would like to note that all the limitations in the Applicant's claims are taught by the collection of references used in this and previous rejections, and in the Office Actions a valid motivation has been given to combine said references. For these reasons, the rejections are maintained.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 5-6, 9-14, 16-19, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soucy (6,476,510), Bushell et al. (6,011,493), and Lacy (6,510,369). Soucy teaches a power management system for an aircraft. He teaches plurality of secondary loads (direct - generator, indirect - load, Fig. 1), at least one flight condition sensor (engine speed sensor), and a microprocessor-based (Col. 6, lines 53-59) controller (fuel supply controller & governor) coupled to the plurality of loads and the sensor. Soucy doesn't explicitly teach the

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types of loads being powered, nor how the controller will control the system to distribute power to the loads efficiently. Bushell teaches one of the secondary electrical loads being powered in an aircraft being a lighting system. It would have been obvious to one of ordinary skill in the art at the time of the invention to have one of the indirect secondary electrical loads (800) in Soucy's invention be the lighting system of the aircraft, since Bushell teaches a lighting system being one of the loads powered by an aircraft and Soucy's fails to teach specific loads being powered in his aircraft and for providing external aircraft lighting needed to best utilize night vision systems. Lacy teaches a system with a controller and primary (uncontrolled residential) and secondary (controlled residential) loads. Lacy teaches a controller that can determine the secondary power extraction, current operating conditions including primary power extraction, and secondary power extraction limit and can operate the plurality of secondary loads in response to the secondary power extraction and limits, which are based on the power source used to supply power to said loads. (Abstract, lines 7-12) The controller, while determining current operating conditions determines the primary power extraction (power output to uncontrolled residential loads). Lacy also teaches the controller operating the secondary loads in priority at all times based on the output limitations from the source of power (Col. 5, lines 56-64). He also teaches the controller limiting the operation the secondary loads when the power extraction is greater than the limit (Col. 4, lines 1-14). (Col. 2, lines 59-67; Col. 3, lines 28-36; Col. 4, lines 32-44) It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Lacy's method of power distribution into Soucy's invention so that the engine can supply power to as many loads as possible in the safest possible way, and to make sure that the engine, and corresponding direct secondary load, never exceeds its output capabilities which may

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lead to malfunction. By implementing Lacy's method it allows Soucy's aircraft engine to satisfy power consumption requirements for an increased number of secondary electrical loads, when Soucy's direct power secondary electrical loads have a combined total power consumption level that is greater than that of the rated maximum secondary power extraction of the aircraft engine.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dru M. Parries whose telephone number is (571) 272-8542. The examiner can normally be reached on Monday -Thursday from 9:00am to 6:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry, can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael J Sherry/

Supervisory Patent Examiner, Art Unit 2836

DMP

2-4-2008